B.B.M.P

BRUHAT BENGALURU MAHANAGARA PALIKE

YELAHANKA ZONE

DIVISION: BYATARAYANAPURA

SUB DIVISION: KODIGEHALLI

Name of Work: Estimate for Improvements to Roads, Drains and Constructions of Culverts at Amruthahalli and Surrounding areas in Ward No. 09, Amruthahalli.

Estimated Cost Rs. 75.00 Lakhs

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

NAME OF WORK:- Improvements to Roads, Drains and Constructions of Culverts at Amruthahalli and Surrounding areas in Ward No. 09, Amruthahalli.

Estimation Cost.Rs 7500000.00

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
2	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)	Cum							
	New Drain								
	Hoodi Layout 4th Cross		1	60.00	1.00	1.00	60.00		
	Hoodi Layout 3th Cross		1	60.00	1.00	1.00	60.00		
	Hoodi Layout 2nd Cross		2	60.00	1.00	1.00	120.00		
	Hoodi Layout 1st Cross		2	60.00	1.00	1.00	120.00		
	Cross Road 1		2	70.00	1.00	1.00	140.00		
	Cross Road 2		2	66.00	1.00	1.00	132.00		
	Culvert								
			2	5.00	1.50	1.20	18.00		
	Drain Desilt								
	Hoodi Layout 4th Cross		1	60.00	0.45	0.45	12.15		
	Hoodi Layout 3th Cross		1	60.00	0.45	0.45	12.15		
	Hoodi Layout 5th Cross		2	60.00	0.45	0.45	24.30		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	204.60							
	Total						**698.60**	204.60	**142934.00**
3	Providing and laying in position Plain Cement Concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)	Cum							
	New Drain								

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	Hoodi Layout 4th Cross		1	60.00	1.00	0.15	9.00		
	Hoodi Layout 3th Cross		1	60.00	1.00	0.15	9.00		
	Hoodi Layout 2nd Cross		2	60.00	1.00	0.15	18.00		
	Hoodi Layout 1st Cross		2	60.00	1.00	0.15	18.00		
	Cross Road 1		2	70.00	1.00	0.15	21.00		
	Cross Road 2		2	66.00	1.00	0.15	19.80		
	Culvert								
			2	5.00	1.50	0.15	2.25		
	Issued Rate 07-07-2022 Basic rate	5554.00							
	Area weightage 10%	555.40							
	Sub Total	6109.40							
	Total						**97.05**	6109.40	**592917.00**
4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2))	Cum							
	New Drain								
	Raft								
	Hoodi Layout 4th Cross		1	60.00	0.90	0.15	8.10		
	Hoodi Layout 3th Cross		1	60.00	0.90	0.15	8.10		
	Hoodi Layout 2nd Cross		2	60.00	0.90	0.15	16.20		
	Hoodi Layout 1st Cross		2	60.00	0.90	0.15	16.20		
	Cross Road 1		2	70.00	0.90	0.15	18.90		
	Cross Road 2		2	66.00	0.90	0.15	17.82		
	Side Wall								
	Hoodi Layout 4th Cross		1x2	60.00	0.15	0.60	10.80		
	Hoodi Layout 3th Cross		1x2	60.00	0.15	0.60	10.80		
	Hoodi Layout 2nd Cross		2x2	60.00	0.15	0.60	21.60		
	Hoodi Layout 1st Cross		2x2	60.00	0.15	0.60	21.60		
	Cross Road 1		2x2	70.00	0.15	0.60	25.20		
	Cross Road 2		2x2	66.00	0.15	0.60	23.76		
	Culvert								
	Raft		2	5.00	1.30	0.20	2.60		
	Side Wall		2x2	5.00	0.30	0.60	3.60		
	Issued Rate 07-07-2022 Basic rate	5968.00							
	Add 5% for Shuttering	298.40							
		6266.40							

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	Area weightage 10%	626.64							
	Sub Total	**6893.04**							
	Total						**205.28**	6893.04	**1415003.00**
5	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 12.1)								
	For Drain	Cum					199.08		
		kg	Steel assumed 60Kg/Cum of Concrete				0.06		
		tonne					**11.94**		
	For Culvert	Cum					6.20		
		kg	Steel assumed 80Kg/Cum of Concrete				0.08		
		tonne					**0.50**		
	Issued Rate 07-07-2022 Basic rate	92170.00							
	Area weightage 10%	9217.00							
	Sub Total	**101387.00**							
	Total						**12.44**	101387.00	**1261335.00**
6	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 (M15) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.1)	Cum							
	Ramp Culvert								
			2x2	6.00	1.00	0.15	3.60		
	Issued Rate 07-07-2022 Basic rate	5880.00							
	Area weightage 10%	588.00							
	Sub Total	6468.00							
	Total						**3.60**	6468.00	**23285.00**
7	Providing and Fixing pre cast Covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting, including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, copmplete. (Data Rate)	Sqm							
	Missing Covering Slab								
	Hoodi Layout 4th Cross		1	60.00	0.75		45.00		

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	Hoodi Layout 3th Cross		1	60.00	0.75		45.00		
	Hoodi Layout 2nd Cross		2	60.00	0.75		90.00		
	Hoodi Layout 1st Cross		2	60.00	0.75		90.00		
	Cross Road 1		2	70.00	0.75		105.00		
	Cross Road 2		2	59.00	0.75		88.50		
	Data rate	2337.00							
	Total						**463.50**	2337.00	**1083200.00**
8	Providing and Fixing pre cast Covering Slab 250mm thick made out of CC 1:2:4 and jelly 25mm Down size with steel reinforcement including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete. As per Engineer incharge	Sqm							
	For Culvert								
	5th Cross Road		2	5.00	1.20		12.00		
	Data rate	5418.00							
	Total						**12.00**	5418.00	**65016.00**
9	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no. 24 Item No. 4.27 (A))	Cum							
	Existing Surface								
	Hoodi Layout 5th Cross		1	60.00	4.50	0.20	54.00		
	Hoodi Layout 4th Cross		1	60.00	4.50	0.20	54.00		
	Hoodi Layout 3th Cross		1	60.00	4.50	0.20	54.00		
	Hoodi Layout 2nd Cross		1	60.00	4.50	0.20	54.00		
	Hoodi Layout 1st Cross		1	60.00	4.50	0.20	54.00		
	Cross Road 1		1	70.00	4.50	0.20	63.00		
	Cross Road 2		1	66.00	4.50	0.20	59.40		
							392.40		
	Consider 30% of Damaged Portion						**117.72**		
	Basic rate	2394.00							
	Area weightage 10%	239.40							
	Sub Total	2633.40							
	Total						**117.72**	2633.40	**310004.00**
10	Providing and applying Primer Coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no. 29 Item No. 5.1.A (i))	Cum							
	Hoodi Layout 5th Cross		1	60.00	4.50		270.00		

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	..oodi Layout 4th Cross		1	60.00	4.50		270.00		
	Hoodi Layout 3th Cross		1	60.00	4.50		270.00		
	Hoodi Layout 2nd Cross		1	60.00	4.50		270.00		
	Hoodi Layout 1st Cross		1	60.00	4.50		270.00		
	Cross Road 1		1	70.00	4.50		315.00		
	Cross Road 2		1	66.00	4.50		297.00		
							1962.00		
	Consider 30% of Damaged Portion						**588.60**		
	Issued Rate 07-07-2022 Basic rate	42.00							
	Area weightage 10%	4.20							
	Sub Total	46.20							
	Total						**588.60**	46.20	**27193.00**
11	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))	Cum							
	Existing Surface								
	Hoodi Layout 5th Cross		1	60.00	4.50	0.05	13.50		
	Hoodi Layout 4th Cross		1	60.00	4.50	0.05	13.50		
	Hoodi Layout 3th Cross		1	60.00	4.50	0.05	13.50		
	Hoodi Layout 2nd Cross		1	60.00	4.50	0.05	13.50		
	Hoodi Layout 1st Cross		1	60.00	4.50	0.05	13.50		
	Cross Road 1		1	70.00	4.50	0.05	15.75		
	Cross Road 2		1	66.00	4.50	0.05	14.85		
							98.10		
	Consider 30% of Damaged Portion						**29.43**		
	Issued Rate 07-07-2022 Basic rate	9139.00							
	Area weightage 10%	913.90							
	Sub Total	10052.90							
	Total						**29.43**	10052.90	**295857.00**
12	Providing and applying Tack Coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no. 29 Item No 5.4 (ii))	Sqm							
	Road Work								
	Existing Surface								
	Hoodi Layout 5th Cross		1	60.00	4.50		270.00		
	Hoodi Layout 4th Cross		1	60.00	4.50		270.00		
	Hoodi Layout 3th Cross		1	60.00	4.50		270.00		

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	Hoodi Layout 2nd Cross		1	60.00	4.50		270.00		
	Hoodi Layout 1st Cross		1	60.00	4.50		270.00		
	Cross Road 1		1	70.00	4.50		315.00		
	Cross Road 2		1	66.00	4.50		297.00		
	Issued Rate 07-07-2022 Basic rate	14.00							
	Area weightage 10%	1.40							
	Sub Total	15.40							
	Total						**1962.00**	15.40	**30215.00**
13	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16 (C))	Cum							
	Road Work								
	Existing Surface								
	Hoodi Layout 5th Cross		1	60.00	4.50	0.04	10.80		
	Hoodi Layout 4th Cross		1	60.00	4.50	0.04	10.80		
	Hoodi Layout 3th Cross		1	60.00	4.50	0.04	10.80		
	Hoodi Layout 2nd Cross		1	60.00	4.50	0.04	10.80		
	Hoodi Layout 1st Cross		1	60.00	4.50	0.04	10.80		
	Cross Road 1		1	70.00	4.50	0.04	12.60		
	Cross Road 2		1	66.00	4.50	0.04	11.88		
	Basic rate	10611.00							
	Area weightage 10%	1061.10							
	Sub Total	11672.10							
	Total						**78.48**	11672.10	**916026.00**
14	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)	Sqm							
	Road Work								
	Hoodi Layout 5th Cross		2	60.00	0.10		12.00		
	Hoodi Layout 4th Cross		2	60.00	0.10		12.00		
	Hoodi Layout 3th Cross		2	60.00	0.10		12.00		
	Hoodi Layout 2nd Cross		2	60.00	0.10		12.00		
	Hoodi Layout 1st Cross		2	60.00	0.10		12.00		
	Cross Road 1		2	70.00	0.10		14.00		

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
	Cross Road 2		2	66.00	0.10		13.20		
	Basic rate	478.00							
	Area weightage 10%	47.80							
	Sub Total	525.80							
	Total						**87.20**	525.80	**45850.00**
18	Loading and Unloading of Stone Boulder / Stone aggregates / Sand / Kankar / Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)	Cum							
	Qty Vide 90% of Item No- (1)						632.23		
	Total						**632.23**	81.40	**51464.00**
	Basic rate	74.00							
	Area Weightage 10%	7.40							
	Total	81.40							
19	Cost of Haulage Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)	T.Km							
	Qty frm Item No-18						632.23		
	Density of Sand/Debris i.e 1.28 Tonne/Cum			632.23	1.28		809.26		
	Cost of Haulage Excluding Loading and Unloading on Surface Road to a distance of 9.80 Kms			809.26	9.80		7930.73		
	Total						**7930.73**	12.00	**95169.00**
	Basic rate	12.00							
								Grand Total	**6355468.00**
								GST Charges (18% of Executed cost)	**1143984.00**
								Miscellenious and rounding off	**548.00**
								Total Amount	**7500000.00**

Rupees Seventy Five Lakh(s) Only

CERTIFICATE:

1) The work spot has been inspected and found to be necessary.
2) The work spot comes under B.B.M.P Limits.
3) The provisions made in the estimate are necessary and minimum.
4) The estimate is based on C.S.R of PWD 2021-22, Issue rates and Data Rates.

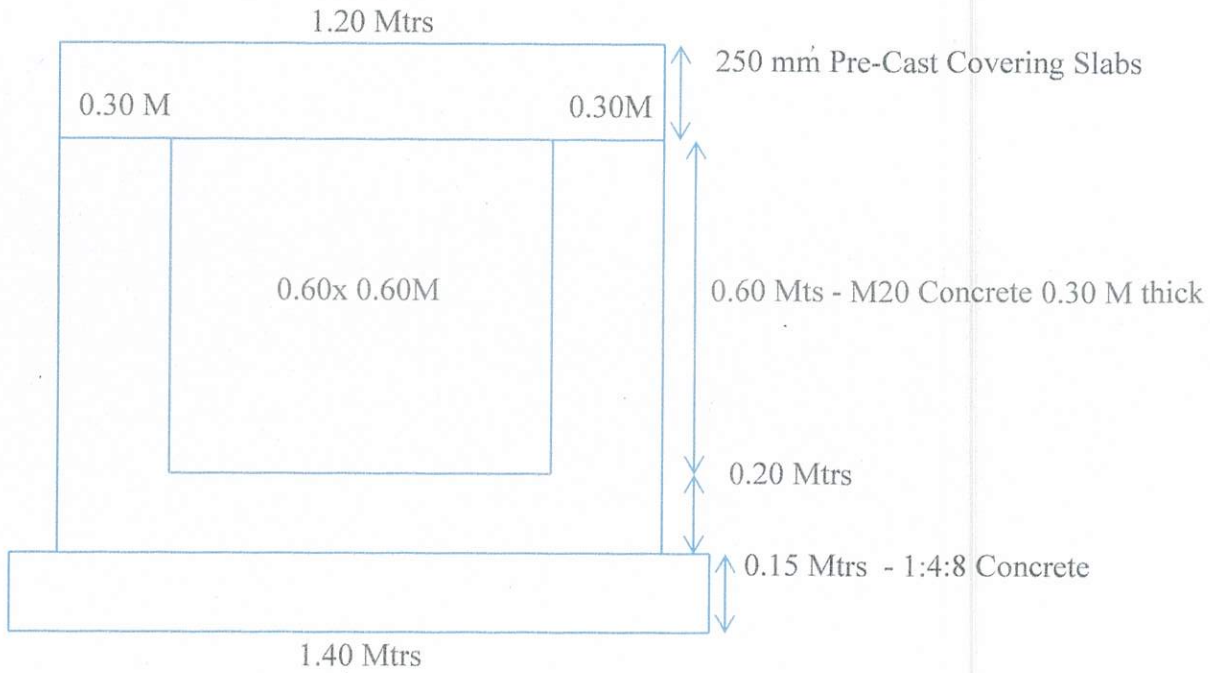
Assistant Engineer
Ward No. 09, Amruthahalli

Assistant Executive Engineer
Kodigehalli Sub Division

Executive Engineer
Byatarayanapura Division
ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ವಿಭಾಗ
ಬೃ.ಬೆ.ಮ.ಪಾ., ಬೆಂಗಳೂರು

ADMINISTRATIVE APPROVAL
Accorded For Rs. Rs. 75.00 Lakh only
Head of A/c. P3726
Div. Ref No. 52 Date 21/02/23
AE EE(BTP)

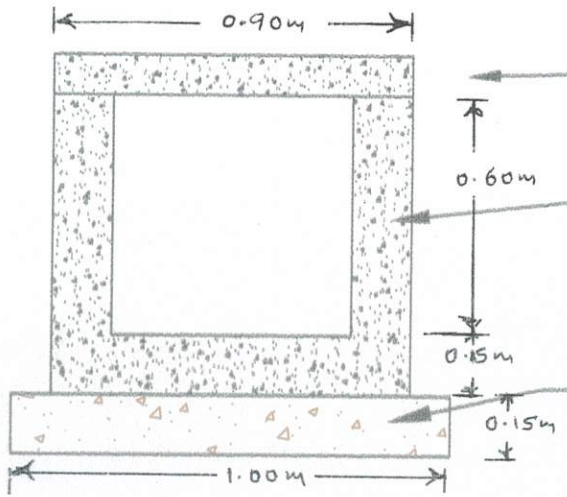
Technical Sanction
Accorded For 75.00 Lakhs
Head of A/C P 3726
CER NO : 109 Dt: 16-9-22



TIPICAL CROSS SECTION OF RCC CULVERT

Assistant Engineer

Assistant Executive Engineer

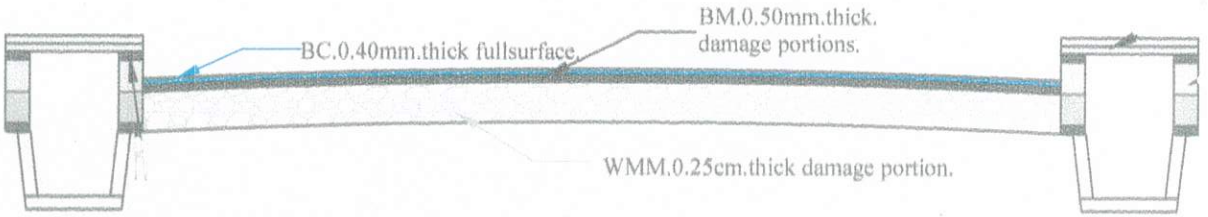


Precost slab Thick.

RCC WALL M-20 Thick 0.15.

PCC 1:4:8 Thick 0.15m.

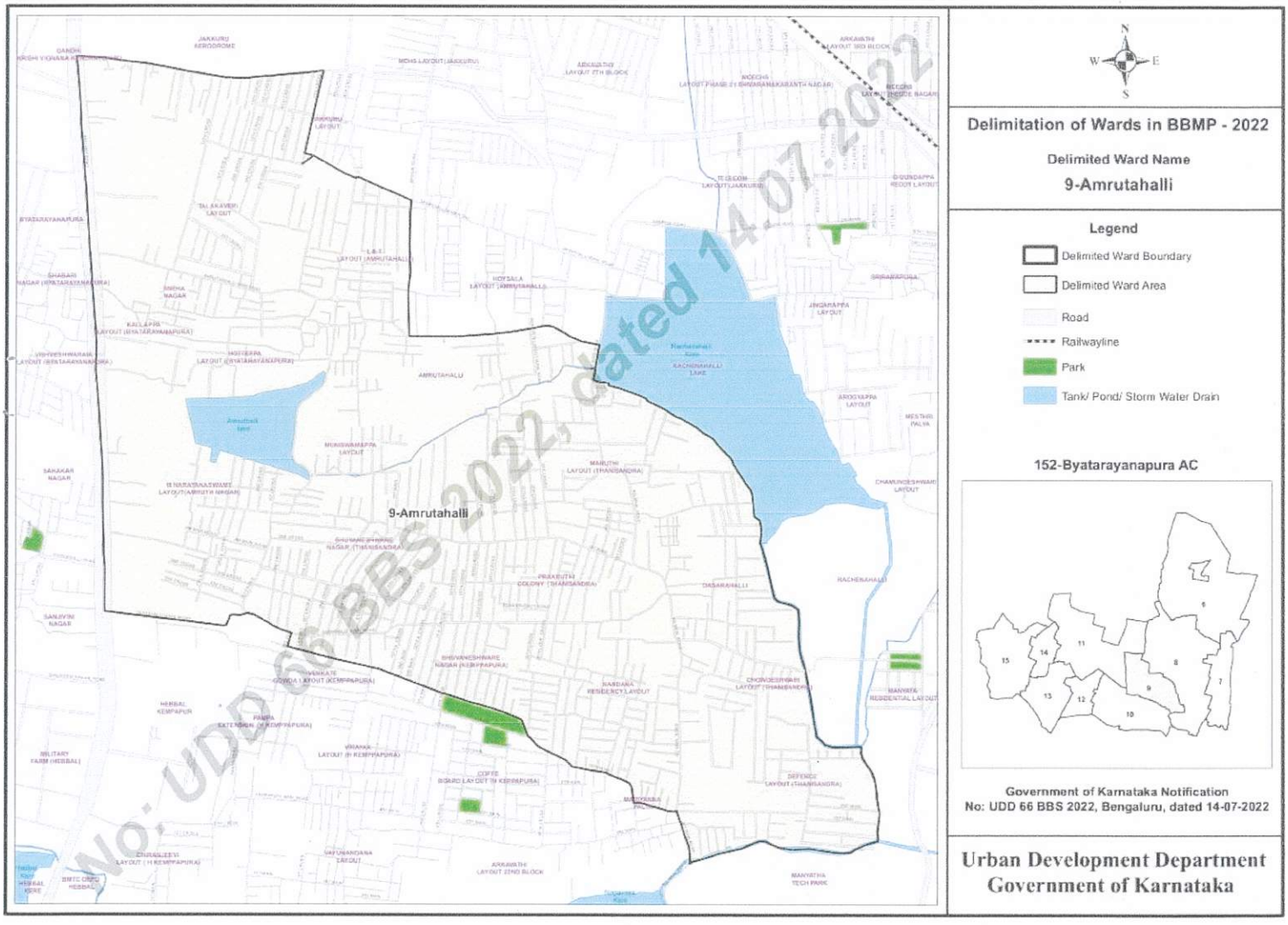
CROSS SECTION OF CC DRAIN



CROSS SECTION OF ASPHALT ROAD.

ASSISTANT ENGINEER.

ASSISTANT EXECUTIVE ENGINEER.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S
Delimitation of Wards in BBMP - 2022
Delimited Ward Name
9-Amrutahalli
Legend
Delimited Ward Boundary
Delimited Ward Area
Road
Railwayline
Park
Tank/ Pond/ Storm Water Drain
152-Byatarayanapura AC
Government of Karnataka Notification
No: UDD 66 BBS 2022, Bengaluru, dated 14-07-2022
Urban Development Department
Government of Karnataka
9-Amrutahalli
No: UDD 66 BBS 2022, dated 14.07.2022